Product Evaluation

The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: RC-563

Effective Date: November 1, 2017
Re-evaluation Date: November 2021

Product Name: Supre, Dura, Eura, and Ulta Steel Roof Panels Installed Over either a Plywood Deck or Wood Battens

Manufacturer: Worthouse, Inc.
3100 Arapahoe Avenue
Suite 104
Boulder, CO 80303-1050
(720) 384-9110

General Description:
The metal roof panels are 26-gauge galvanized steel with a paint finish. Illustrations of the panels are provided in Figures 1 thru 4. The Supre panel and the Dura panel have a maximum coverage of 45.28". The Eura panel has a maximum coverage of 43.34". The Ulta panel has a maximum coverage of 44.88". The panels have a minimum yield strength of 46,000 psi.

This evaluation report is for metal roof panels that are secured either directly to a plywood deck or to wood battens that are secured to a plywood deck. Thicker plywood may be used; however, the design pressure rating for the metal panels will be as specified in this evaluation report.

Limitations:
Design Wind Pressures: The design wind pressure uplift resistance is specified in Tables 1 and 2.

Roof Framing: Roof framing (rafters or trusses) must not exceed 24" on center.

Installation Over an Existing Roof Covering: Installation over an existing roof covering is not permitted.

Roof Slope: The metal panels may be installed on roofs with a roof slope as low as 3:12.

Installation:
Direct-to-Deck: The metal roof panels must be secured to plywood deck in accordance with the installation details and Table 1.

Table 1
Attachment of Metal Roof Panels to Minimum 15/32" plywood.

Panel	Fasteners Per Panel	Design Pressure
Supre, Dura, Ulta	10 screws	-82.5 psf
	20 screws	-97.5 psf
Eura	12 screws	-82.5 psf
	24 screws	-97.5 psf

Roof Deck: Minimum 15/32" plywood.

Roof Deck Attachment: The roof deck must be secured to the roof framing to resist the required wind uplift design pressures.

Underlayment: A minimum of one layer of No. 30 (Type II) asphalt felt must be used. The underlayment used must comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The felt must be installed with minimum 4" side laps and minimum 6" end laps. The underlayment must be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners must be applied along the overlaps not farther apart than 36" on center.

Attachment of Panels to Roof Deck: The panels must be secured to the roof deck with minimum 4.8mm x 35mm HWH screws with 14mm OD sealing washers. The required number of fasteners per panel is specified in Table 1. The fastener pattern is illustrated in Figures 5, 6, 7, and 8. The fasteners must be long enough to penetrate completely through the wood deck.

Panel Laps: The panels must be secured to the roof deck with minimum 4.8mm x 35mm HWH screws with 14mm OD sealing washers at the preformed locations. The fasteners must be long enough to penetrate completely through the wood deck.

Panel Ends: As required by the manufacturer.

Panel Edges: As required by the manufacturer.

Trim: Components such as eave trim, rake trim, hip trim, and valley trim must be installed as required by the manufacturer.

Batten/Counter Batten: The metal roof panels must be secured to battens in accordance with the installation details and Table 2.

Table 2
Attachment of Metal Roof Panels to Battens.

Panel	Fasteners Per Panel	Design Pressure
Supre, Dura, Ulta	5 screws	-120.0 psf
	10 screws	-157.5 psf
Eura	6 screws	-120.0 psf
	12 screws	-157.5 psf

Roof Deck: Minimum 15/32" plywood.

Roof Deck Attachment: The roof deck must be secured to the roof framing to resist the required wind uplift design pressures.

Underlayment: A minimum of one layer of No. 30 (Type II) asphalt felt must be used. The underlayment used must comply with one or more of the following: ASTM D 226, ASTM D 4869, or ASTM D 1970. The felt must be installed with minimum 4" side laps and minimum 6" end laps. The underlayment must be applied with corrosion-resistant fasteners in accordance with manufacturer's installation instructions. Fasteners must be applied along the overlaps not farther apart than 36" on center.

Counter Battens: Nominal 1x4 No. 2 Southern Yellow Pine. Laid onto the roof deck over the roof framing locations (Maximum 24" on center).

Battens: Nominal 2x4 No. 2 Southern Yellow Pine. Laid onto and perpendicular to the counter battens 14" on center. Secured to the counter battens and roof deck with two No 10 x 3-1/2" stainless steel screws at each batten/counter batten location. The fasteners must be long enough to penetrate through the counter battens, roof deck, and 3/4" into the roof framing.

Attachment of Panels to Battens: The panels must be secured to the battens with minimum 4.8mm x 35mm HWH screws with 14mm OD sealing washers. The required number of fasteners per panel is specified in Table 2. The fastener pattern is illustrated in Figures 5, 6, 7, and 8. The fasteners must penetrate into the battens.

Panel Laps: The panels must be secured to the battens with minimum 4.8mm x 35mm HWH screws with 14mm OD sealing washers at the preformed locations. The fasteners must penetrate into the battens.

Panel Ends: As required by the manufacturer.

Panel Edges: As required by the manufacturer.

Trim: Components such as eave trim, rake trim, hip trim, and valley trim must be installed as required by the manufacturer.

Note: Keep the manufacturer's installation instructions available on the job site during installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.

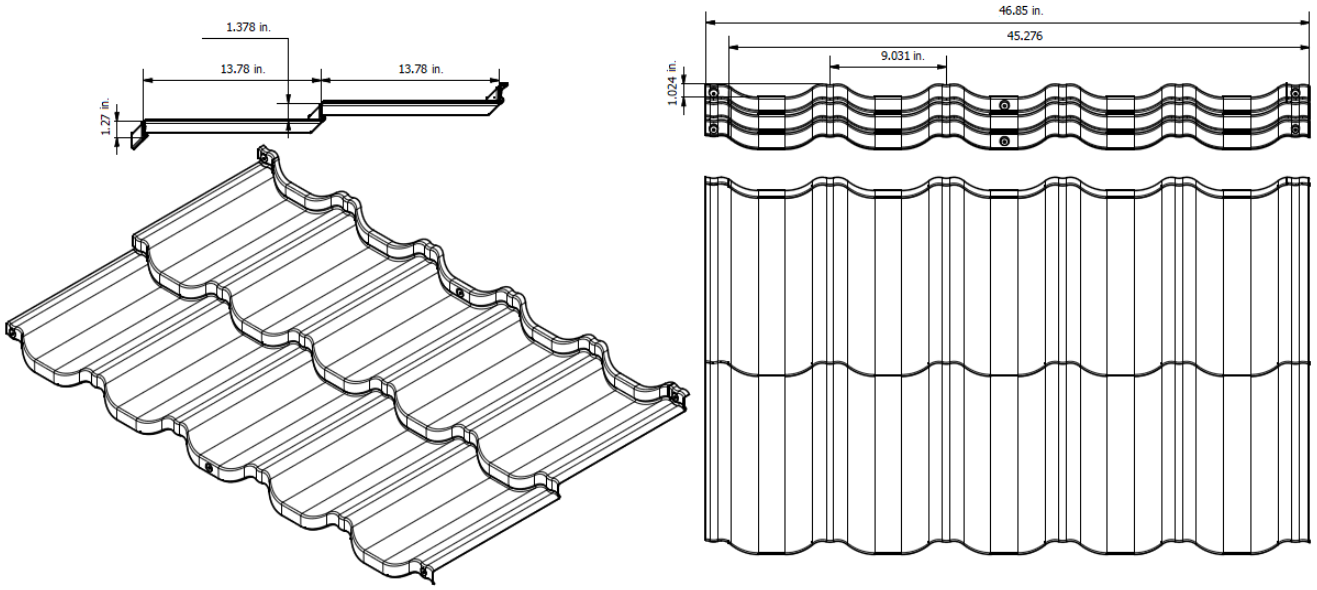


Figure 1. Supre Panel

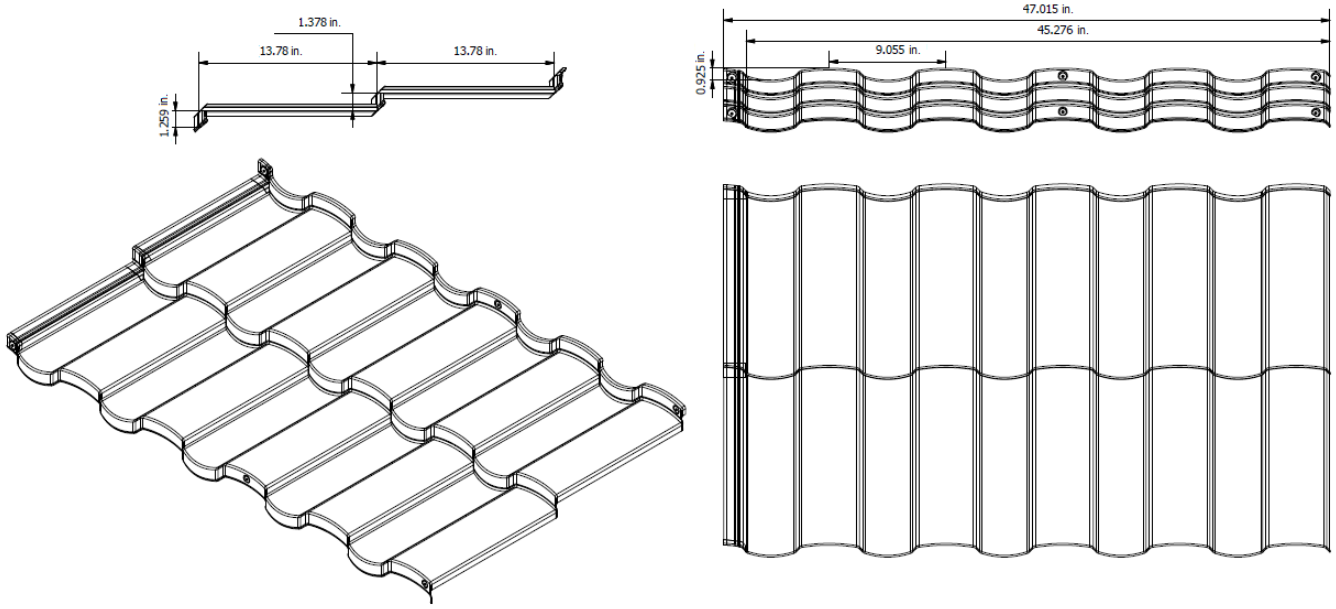


Figure 2. Dura Panel

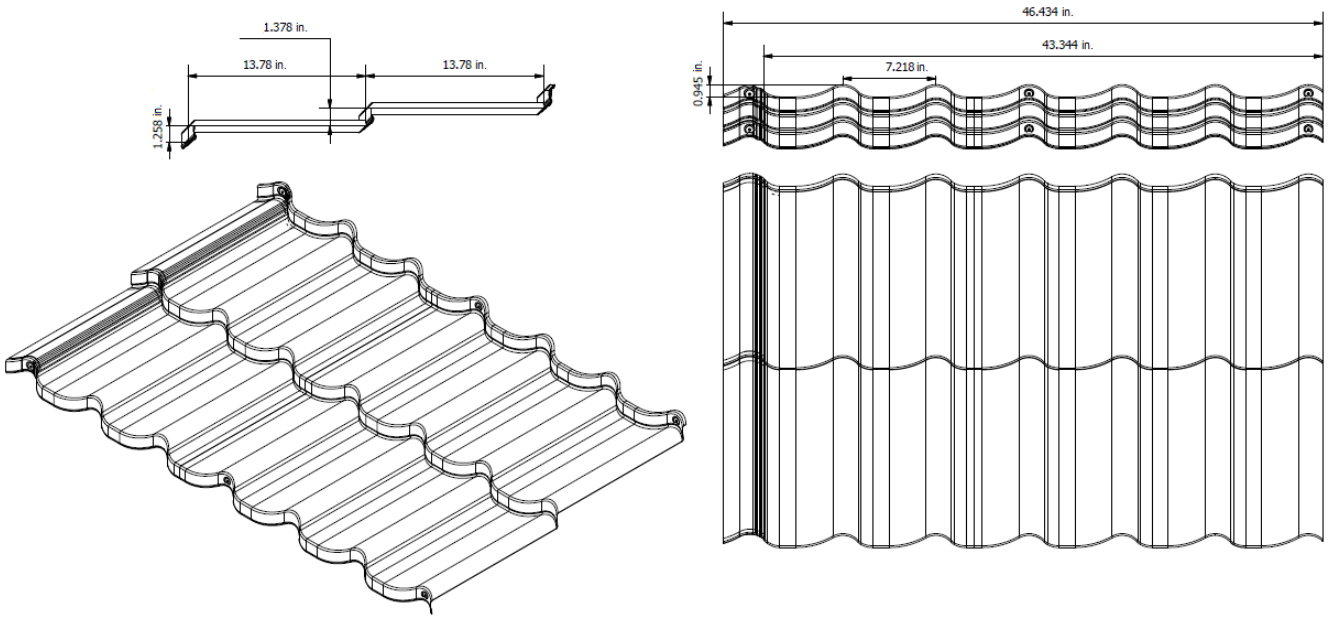


Figure 3. Eura Panel

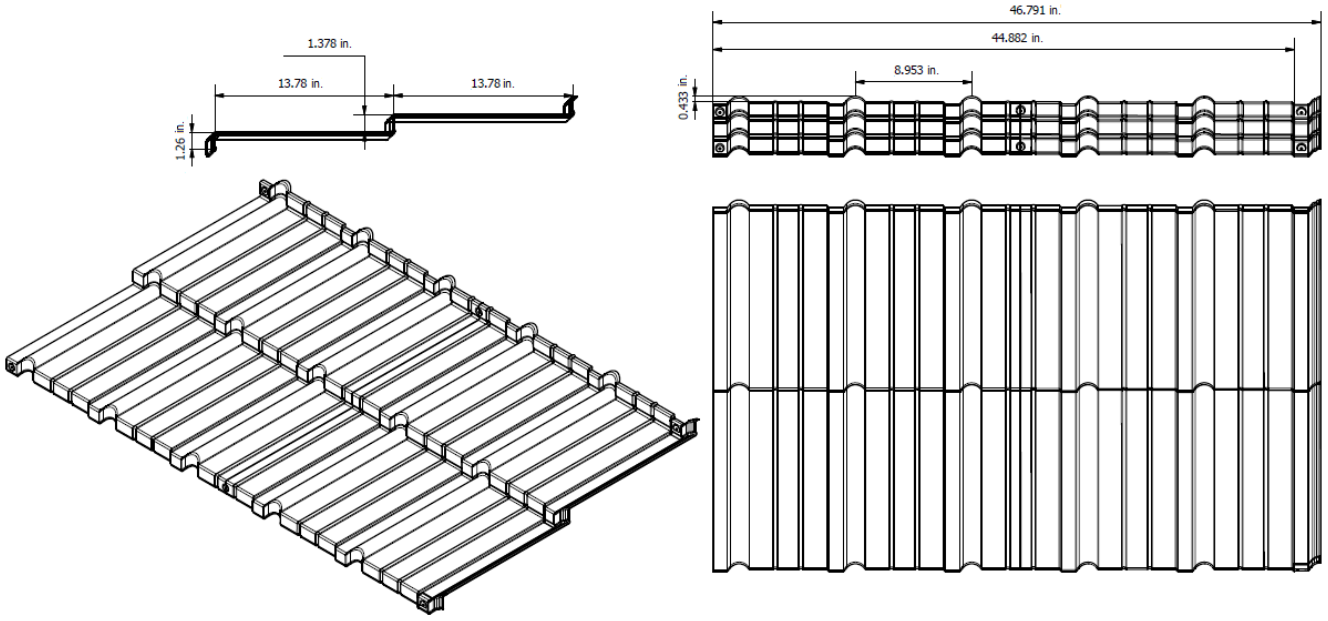
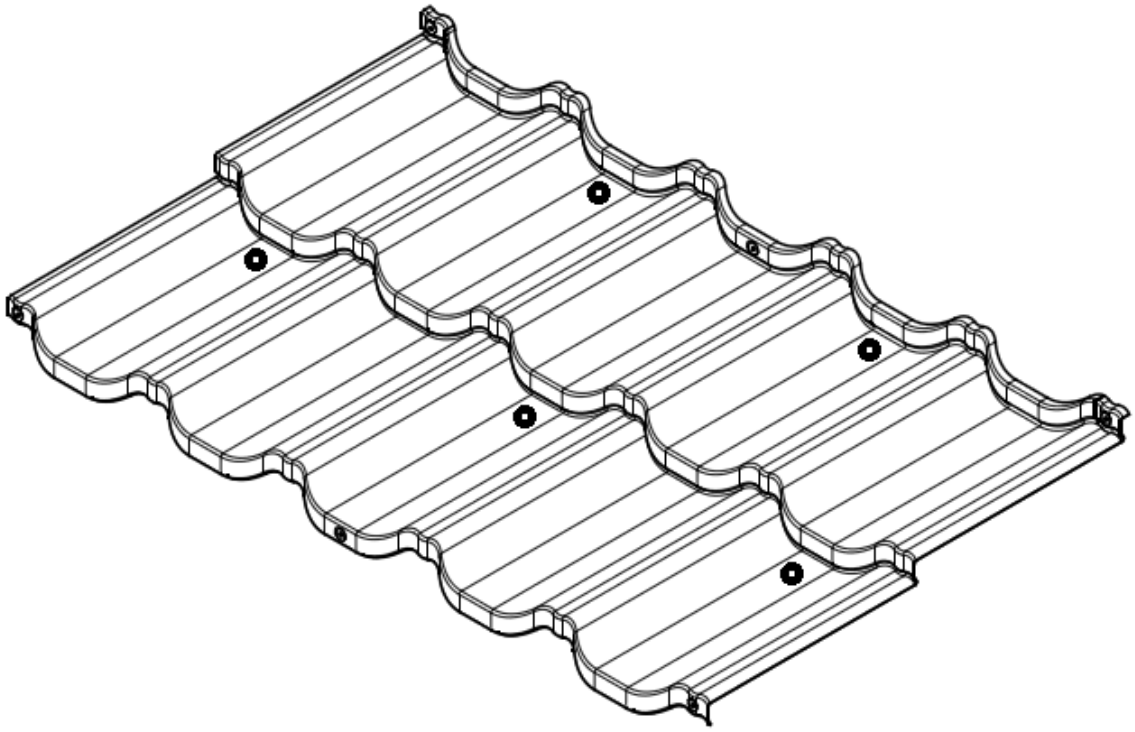
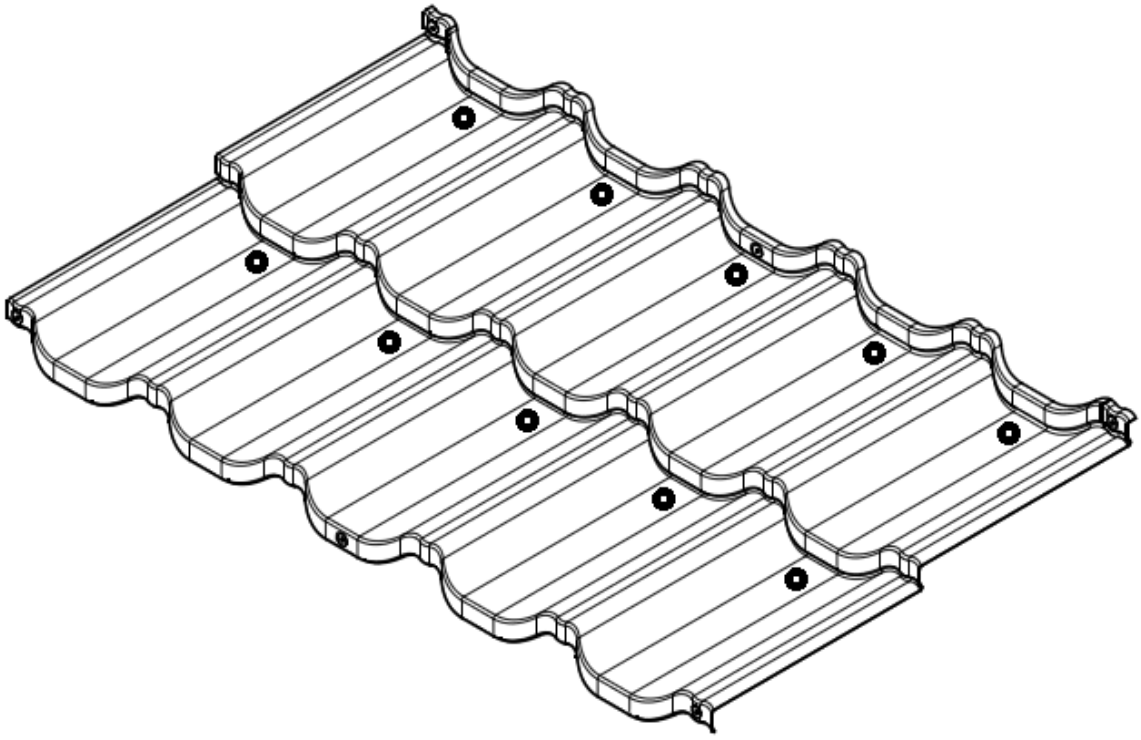


Figure 4. Ulta Panel

Figure 5. Supre Panel Fastening Locations

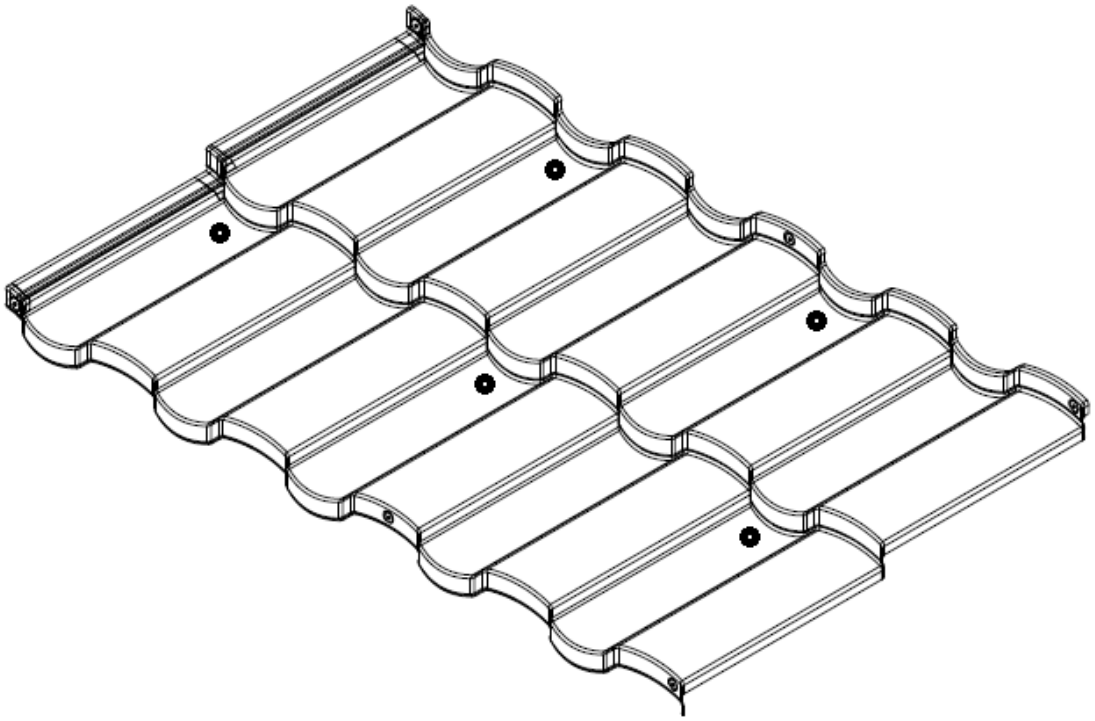


"5 screws per panel"

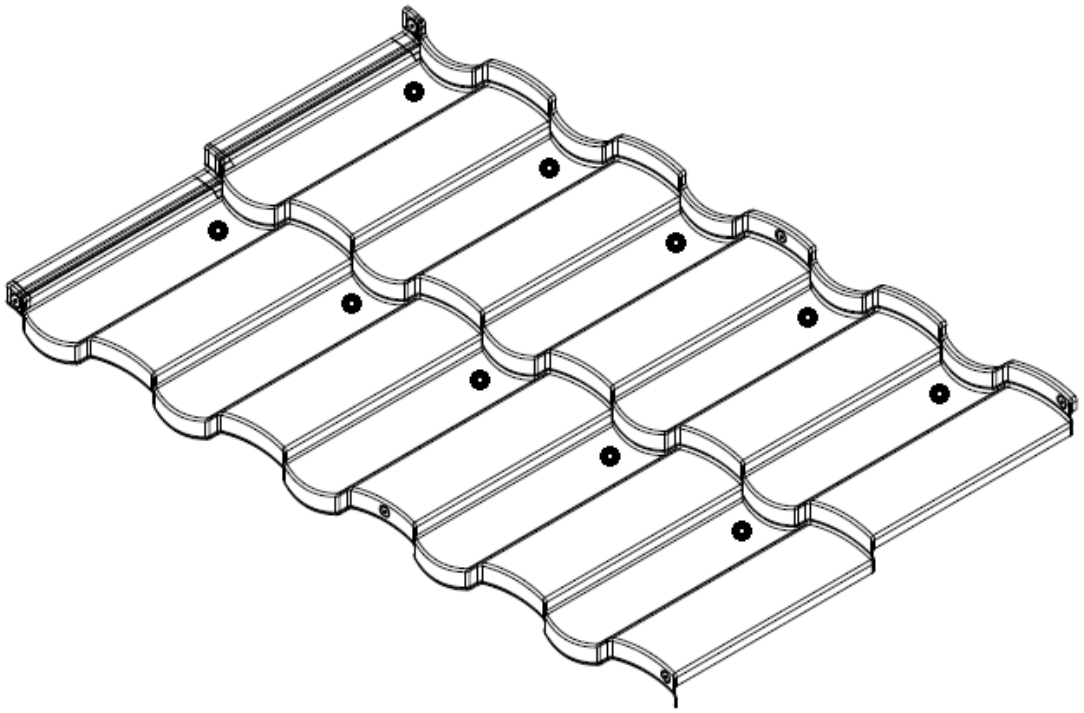


"10 screws per panel" with one fastener at each indicated location.
"20 screws per panel" with two fasteners at each indicated location (1-inch apart).

Figure 6. Dura Panel Fastening Patterns

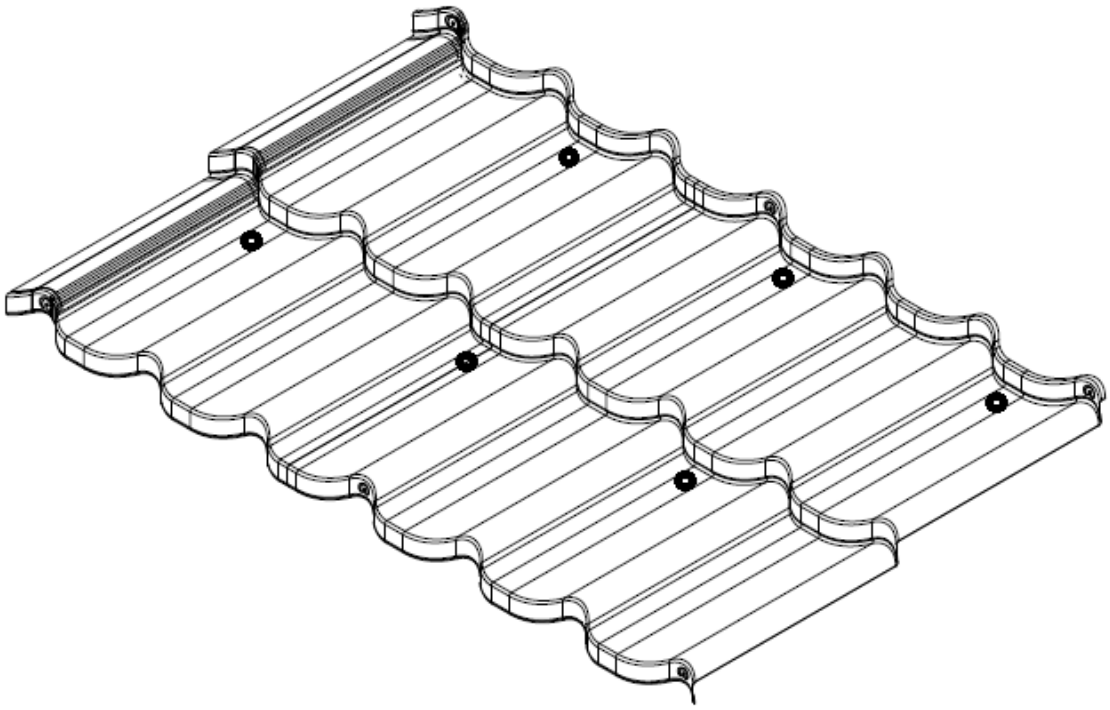


"5 screws per panel"

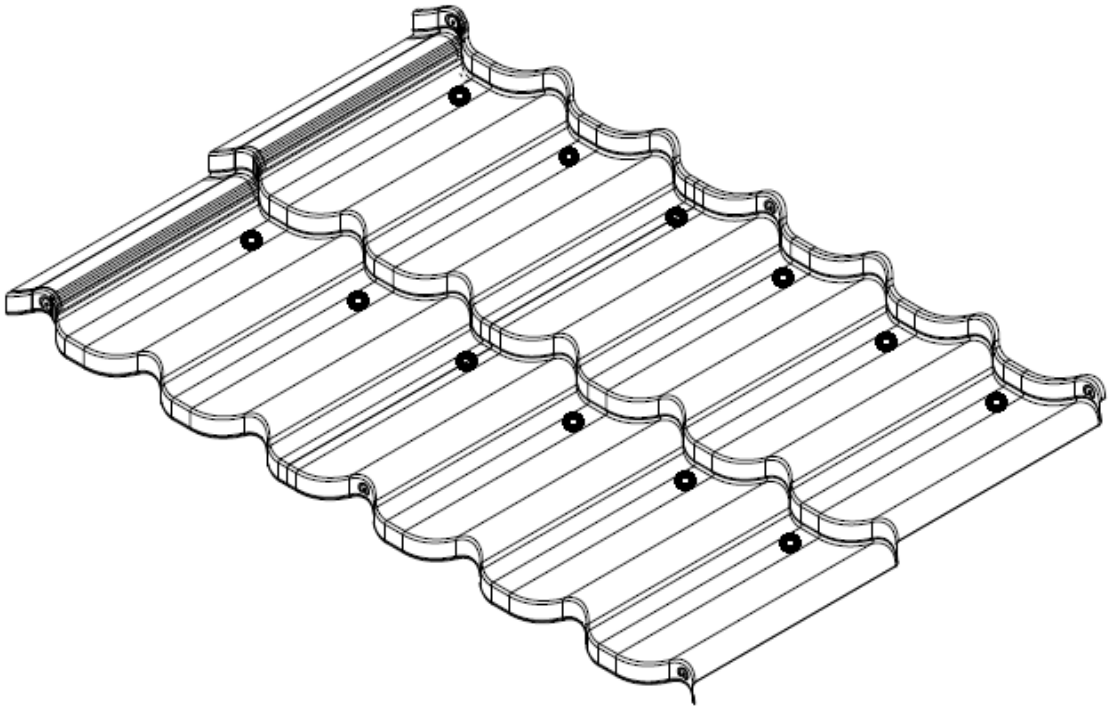


"10 screws per panel" with one fastener at each indicated location.
"20 screws per panel" with two fasteners at each indicated location (1-inch apart).

Figure 7. Eura Panel Fastening Patterns

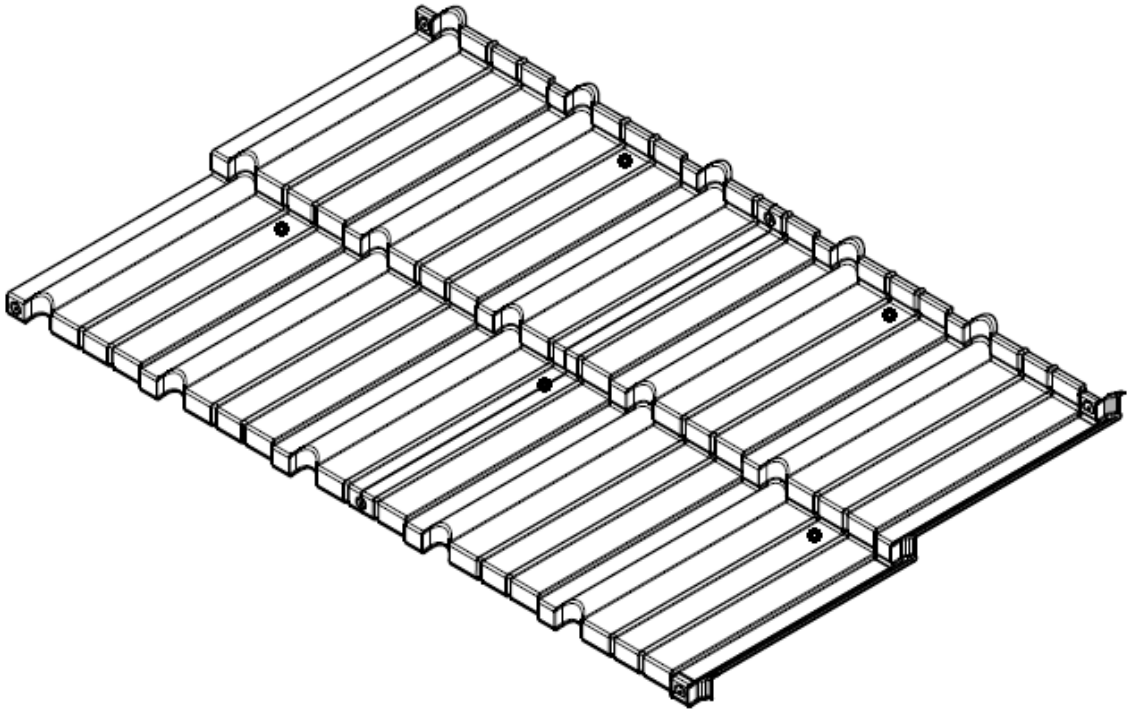


"6 screws per panel"

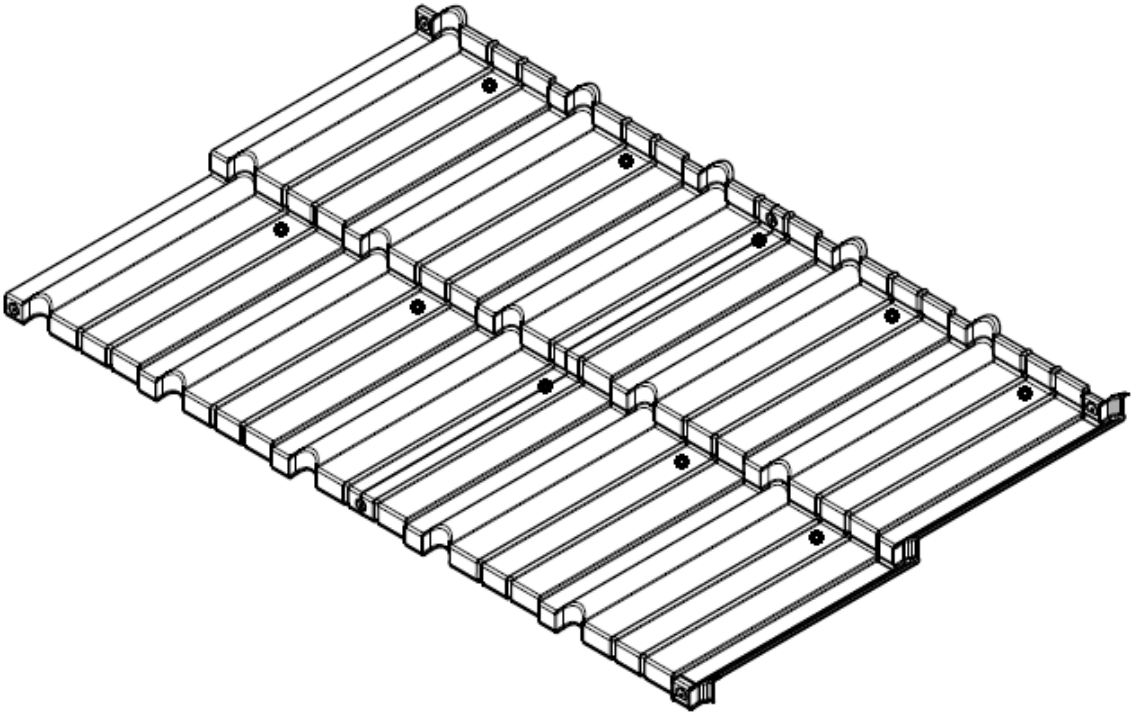


"12 screws per panel" with one fastener at each indicated location.
24 screws per panel" with two fasteners at each indicated location (1-inch apart).

Figure 8. Ulta Panel Fastening Patterns



"5 screws per panel"



"10 screws per panel" with one fastener at each indicated location.
"20 screws per panel" with two fasteners at each indicated location (1-inch apart).